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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

GOLLAMUDI, SHARMILA S

ART UNIT

PAPER NUMBER

1616

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,435

Applicant(s)

CAO ET AL.

Examiner

Sharmila S. Gollamudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-14,16-18 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-14,16-18 and 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Receipt of Request for Continued Examination and Amendments/Response filed October 27, 2004 is acknowledged. Claims **1, 4-14,16-18 and 20-28** are pending in this application. Claims 2-3, 15, and 19 stand cancelled.

Response to Amendment

The Declaration under 37 CFR 1.132 filed 5/12/04 is insufficient to overcome the rejection of claims based upon JP 11-236310 and US patent 6,017,860 to Sajic et al as set forth in the last Office action because:

Firstly, the examiner notes that Formula 13 of the instant invention contains 1% of the heat-treated xanthan gum. However, applicant is comparing formula 13 to JP's formula containing 0.3% heat-treated xanthan gum. This is not a proper comparison since it is unclear if the fixative effect increases with the weight percent.

Secondly, it is noted that claim 1 recites, "has a high humidity curl retention of at least **about** 80% for two hours". The examiner further points out that the recitation "about" permits some tolerance of ± 10 degrees. See *In re Ayers*, 154 F2d 182, 69 USPQ 109 (CCPA 1946) and *In re Erickson*, 343 F2d 778, USPQ 207 (CCPA 1965). In instance case, the examiner notes that both comparative examples have a curl retention around 70% at two hours, which falls, within applicant's scope of "about 80%".

Lastly, the examiner notes that Formula 13 does not state the exact nature of the heat-treated xanthan gum. For instance, other formulations disclose a gum treated at 235 degrees Fahrenheit for 60 minutes. However, it is unclear how long and at what temperature the xanthan gum in Formula 13 is treated at.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 6-11, 18, and 24-26 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-236310.

JP 11-236310 discloses a composition containing heat treated xanthan gum in the amount of 0.01-2%, that can be used in hair cosmetics and in the form of a cream or gel and method of preparing compositions containing the heat treated xanthan gum. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. JP discloses heating the xanthan gum to provide for a high molecular weight xanthan gum. The gum is heated at 100-140 degrees Celsius, preferably 100-130 degrees Celsius, and most preferably 105-125 degrees Celsius for 30 minutes to 10 hours and more preferably 30 minutes to 7 hours. The reference discloses to avoid discoloration of the gum the xanthan gum should not be heated above 140 degrees. The xanthan has a moisture content of less than 50%, preferably less than 20%, and most preferably less than 15%. See page 5. Reference example 2 discloses an aqueous solution of the high molecular weight xanthan gum (heat treated

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at 115 degrees Celsius for 3 hours) at a weight percent of 0.5, 1, 1.5, and 2. The viscosity of 0.5% is 5000 mPas, 1% is 10,000 mPas, 1.5% 22,000 mPas, and 2% is 33,000 mPas. JP teaches heating of the polymer is done in a liquid to avoid discoloration.

Note that although JP does not address the moisture content limitation of less than 8% and less than 1%, it is the examiner's position that since JP's xanthan gum disclosed in Reference Example 2 inherently has this moisture content. The examiner bases this position on that fact that JP's xanthan gum is heated treated at 115 degrees Celsius for 3 hours and applicant claims a heat treatment of 105 degrees Celsius for at least 2.5 hours has a moisture content of less than 1%.

With regard to the limitation of "a fixative effective amount", the instant specification defines on page 7 wherein applicant states that the xanthan gum is utilized in the amount of 0.01-20% and preferably 0.01- less than 2% and JP teaches a range of 0.01-2%.

Note that it is the examiner's position that Reference Example 2 must inherently meet the recitation "wherein the composition has a high humidity curl retention of at least about 80% for two hours at 90% relative humidity" since the prior art utilizes the same xanthan gum as instant invention. Further, the recitation "wherein the cosmetic composition is a hair fixative composition" is intended use without imparting a structural limitation and if the prior art composition is capable of performing the intended use, as seen in instant case, then it meets the limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 12, 21-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310.

JP 11-236310 discloses a composition containing heat treated xanthan gum in the amount of 0.01-2%, that can be used in hair cosmetics and in the form of a cream or gel and method of preparing compositions containing the heat treated xanthan gum. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. JP discloses heating the xanthan gum to provide for a high molecular weight xanthan gum. The gum is heated at 100-140 degrees Celsius, preferably 100-130 degrees Celsius, and most preferably 105-125 degrees Celsius for 30 minutes to 10 hours and more preferably 30 minutes to 7 hours. The reference discloses to avoid discoloration of the gum the xanthan gum should not be heated above 140 degrees. The xanthan has a moisture content of less than 50%, preferably less than 20%, and most preferably less than 15%. See page 5. Reference example 2 discloses an aqueous solution of the high molecular weight xanthan gum (heat treated at 115 degrees Celsius for 3 hours) at a weight percent of 0.5, 1, 1.5, and 2. The viscosity of

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0.5% is 5000 mPas, 1% is 10,000 mPas, 1.5% 22,000 mPas, and 2% is 33,000 mPas. JP teaches heating of the polymer is done in a liquid to avoid discoloration.

JP does not specify the turbidity of the composition. Further, JP does not specify the method of claim 21 and 22.

It is deemed obvious to a skilled artisan in the art at the time the invention was made to manipulate the prior art's turbidity parameters to provide for a desired result thorough routine experimentation. It is known to skilled artisan that a turbid solution has a value about 100 NTU or higher whereas a slight hazy solution has a value 20 to 50 NTU. See art of interest US 6,147,038. Therefore, a skilled practitioner would have been motivated to decrease turbidity of the hair composition to manipulate the clarity of the composition to provide for an aesthetically pleasing product, i.e. translucent product.

It is further obvious to a skilled artisan in the art at the time the invention was made to apply JP's xanthan gum composition to the hair. One would have been motivated to do so since JP teaches the use of JP's heat treated xanthan gum in hair compositions (page 11); thus the methodology of a hair composition is implicit in that it is applied to the hair.

Claims 13-14, 16-17, 20-23, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 11-236310 in view of Bhatt et al (6,113,881).

JP 11-236310 discloses a composition containing heat treated xanthan gum in the amount of 0.01-2%, that can be used in hair cosmetics and in the form of a cream or gel and method of preparing compositions containing the heat treated xanthan gum. The reference discloses that xanthan gum provides stability to the composition but has low viscosity and a greasy feel if too much is added. JP discloses heating the xanthan gum to provide for a high molecular weight

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xanthan gum. The gum is heated at 100-140 degrees Celsius, preferably 100-130 degrees Celsius, and most preferably 105-125 degrees Celsius for 30 minutes to 10 hours and more preferably 30 minutes to 7 hours. The reference discloses to avoid discoloration of the gum the xanthan gum should not be heated above 140 degrees. The xanthan has a moisture content of less than 50%, preferably less than 20%, and most preferably less than 15%. See page 5. Reference example 2 discloses an aqueous solution of the high molecular weight xanthan gum (heat treated at 115 degrees Celsius for 3 hours) at a weight percent of 0.5, 1, 1.5, and 2. The viscosity of 0.5% is 5000 mPas, 1% is 10,000 mPas, 1.5% 22,000 mPas, and 2% is 33,000 mPas. JP teaches the xanthan gum may be used in hair cosmetics and may include other additives such as film-forming agents, resins, film-forming agents, etc. See page 7, first paragraph.

Although, JP 11-236310 suggests the use of other film-forming polymers, JP does specify the instant polymers. Also, JP does not specify the use of a surfactant-free mousse formulation.

Bhatt et al teach a hair styling surfactant free mousse containing a polyurethane hair resin. See abstract. Bhatt teaches polyurethane resins have good tear strength, excellent washability, good adhesion, and are soluble in water. Further, Bhatt teaches the use of polyurethane resins allow styling of the hair with curling irons and has foaming properties that allow omission of surfactants from the mousse composition. Bhatt et al disclose that the mousse has better hair retention because it is free of surfactants, which can plasticize dry resinous films left on hair, which adversely affect the hair retention properties. See column 3, lines 1-15 and column 7, lines 5-15. Additionally, the reference teaches the use of instant hair fixative resins to provide a degree of stiffness for a certain configuration. See column 13, lines 1-66. Lastly, Bhatt

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teaches the polyurethane resins and the second fixative resins provide for a clear solution. See column 5, lines 15-20.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of JP 11-236310 and Bhatt et al and include a secondary polymer to yield the instant curl retention. One would have been motivated to do to increase the style-retention capacity of the composition since Bhatt teaches the instant polymers provide styling/holding capacity and stiffness. Further, Bhatt teaches the use of instant polyurethane resins allow the omission of surfactants to provide for better hair hold retention of the resin utilized. Therefore, it is prima facie obvious to utilize a secondary fixative polymer to increase the holding capacity of the hair.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4, 6-12, and 24-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-11 co-pending application 10/371459. Although the conflicting claims are not identical, they are not

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patentably distinct from each other because co-pending claims encompass the subject matter of the instant application and vice-versa.

Instant application is directed to a hair fixative composition containing heat-treated xanthan gum, heat treated at 100 degrees C and at least 30 minutes, and having curl retention of about 80%. Further, the claims are directed to the method of preparing the composition, method of providing fixative properties, and method of providing curl retention.

Co-pending application 10/371459 claims a composition containing a generic heat-treated xanthan gum with a viscosity of at least 12,500. Claim 11 recites that the composition is cosmetic or personal care.

Co-pending application is directed to the broader composition (genus) and the instant is directed the narrower scope (species). Therefore, the co-pending application fully encompasses the scope of the instant application and thus is said to anticipate the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 4-14,16-18 and 20-28 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims co-pending application 10/198469. Although the conflicting claims are not identical, they are not patentably distinct from each other because co-pending claims encompass the subject matter of the instant application and vice-versa.

Instant application is directed to a hair fixative composition containing heat-treated xanthan gum, heat treated at 100 degrees C and at least 30 minutes, and having curl retention of

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at least about 80%. Further, the claims are directed to the method of preparing the composition, method of providing fixative properties, and method of providing curl retention.

Co-pending application independent claim is directed to a heat-treated xanthan gum in a hair fixative composition, the method of preparing the composition, method of providing fixative properties, and method of providing curl retention. The dependent claims recite wherein heat treatment of the gum is done at least 60 degrees C, at least 100 degrees C, and at least 105 degrees C respectively. Further, the dependent claims recite wherein the treatment is done for at least one hour or 2.5 hours and having a moisture content of less than 8% and 1% respectively.

However, the instant application and co-pending application are considered to be obvious over each other. Independent claim 1 of co-pending application is directed to the broader composition (genus) and instant application is directed to a narrow composition since it specifies the temperature and time in which the xanthan gum is treated. Thus, co-pending application claim 1 fully encompasses the instant claims and thus is said to anticipate the instant invention.

Art of Interest

The prior art US 6,147,038 is cited as art of interest for its general teaching at the time the invention was made of turbidity as measured in NTU.

Conclusion

None of the claims are allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila S. Gollamudi whose telephone number is 571-272-0614. The examiner can normally be reached on M-F (8:00-5:30), alternate Fridays off.

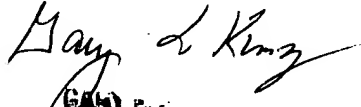
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Kunz can be reached on 571-272-0887. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharmila S. Gollamudi
Examiner
Art Unit 1616

SSG


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